

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated July 18, 2011 has been received and its contents carefully reviewed.

Claims 6, 7, 10, and 13 were canceled previously. Accordingly, claims 1-5, 8, 9, 11, and 12 are currently pending. Reexamination and reconsideration of the pending claims are respectfully requested.

The Office Action rejects claims 1, 2, 4, 5, and 8 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,811,806 to Droski (*Droski*) in view of U.S. Patent Application Publication No. 2003/0027505 to Withers et al. (*Withers*). Applicants respectfully traverse the rejection.

To *establish prima facie* obviousness of a claimed invention, all the elements of the claim must be taught or suggested by the prior art. The combined teaching of *Droski* and *Withers* fails to teach or suggest all the elements of claims 1, 2, 4, 5, and 8, and thus cannot render these claims obvious.

Claim 1 recites “a catalyst solution preheating device preheating **a cathode catalyst solution** and **an anode catalyst solution** ... spray the supplied cathode catalyst solution to **one side of an electrolyte membrane** ... spray the supplied anode catalyst solution to **other side of the electrolyte membrane.**” *Droski* fails to teach or suggest at least these elements of claim 1. *Droski* discloses “an apparatus and method for spray coating **sheet material** with a heated and atomized **liquid compound.**” *Droski*, column 1, lines 7-10, emphases added. The liquid compound can be lubricants. *Droski* is completely silent with respect to a cathode and anode catalyst solution and an electrolyte membrane. Moreover, the apparatus of *Droski* is completely different from the system for manufacturing a membrane electrode assembly for a fuel cell of claim 1.

Withers does not cure the deficiencies of *Droski*. *Withers* is silent with respect to the above-recited elements of claim 1. *Withers* discloses a method and apparatus for polishing a substrate in a chemical mechanical polishing system. *Withers*, ¶0002. Specifically, *Withers*

discloses “supplying **polishing fluid** to one location of **a chemical mechanical polishing surface** at a first rate and providing polishing fluid to a second location of the polishing surface at a second rate.” *Withers*, ¶0010, emphases added. Furthermore, the polishing fluid is **only supplied to one side** of the polishing surface. The apparatus of *Withers* is completely different from the system for manufacturing a membrane electrode assembly for a fuel cell of claim 1.

Accordingly, claim 1 is allowable over the combined teaching of *Droski* and *Withers*. Claims 2, 4, 5, and 8 variously depend from claim 1, and are also allowable for at least the same reasons as claim 1. Applicants therefore respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 1, 2, 4, 5, and 8.

The Office Action rejects claim 3 under 35 U.S.C. §103(a) as being unpatentable over *Droski* in view of *Withers*, and further in view of JP 2001-038254 to Aoyama et al. (*Aoyama*). Applicants respectfully traverse the rejection.

Claim 3 depends from claim 1, and incorporates all the elements of claim 1. As discussed, the combined teaching of *Droski* and *Withers* fails to teach or suggest at least the above-recited element of claim 1, namely, “a catalyst solution preheating device preheating a cathode catalyst solution and an anode catalyst solution ... spray the supplied cathode catalyst solution to one side of an electrolyte membrane ... spray the supplied anode catalyst solution to other side of the electrolyte membrane.”

Aoyama does not cure the deficiency of *Droski* and *Withers* with respect to claim 1. In fact, the Office Action cites *Aoyama* for disclosing that “each nozzle of the apparatus is connected to an associated batch tank and heater.” *Office Action*, page 5. *Aoyama* is also silent with respect to the above-recited elements of claim 1.

Accordingly, claim 3 is allowable over the combined teaching of *Droski*, *Withers*, and *Aoyama*. Applicants therefore respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claim 3.

The Office Action rejects claims 9, 11, and 12 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2005/0163920 to Yan et al. (*Yan*) in

view of U.S. Patent No. 3,391,986 to Goode et al. (*Goode*), and *Toru*. Applicants respectfully traverse the rejection.

Claim 9 recites, “**preheating** a cathode catalyst solution; **preheating** an anode catalyst solution; **preheating** a carrying gas; spraying the **preheated cathode catalyst solution** ... spraying the **preheated anode catalyst solution** ... the carrying gas is heated to a temperature that is higher than the boiling points of the cathode catalyst solution and the anode catalyst solution.

Yan fails to teach or suggest at least these elements of claim 9. *Yan* discloses spraying and drying a catalyst on membrane, but is silent with respect to preheating a cathode catalyst solution and preheating an anode catalyst solution. *Yan* discloses using an airbrush gun, but is silent with respect to preheating a carrying gas.

Goode does not cure the deficiency of *Yan* with respect to claim 1. The Office Action cites *Goode* for disclosing that “the exit temperature of a catalyst solution and carrier gas mixture from a spray nozzle may be elevated due to heating.” *Office Action*, page 6. *Goode* is also silent with respect to the above-recited element of claim 1.

Accordingly, claim 1 is allowable over the combined teaching of *Yan* and *Goode*. Claims 11 and 12 depend from claim 9, and are also allowable for at least the same reasons as claim 9. Applicants therefore respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 9, 11, and 12.

The application is in condition for allowance and early, favorable action is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the

filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

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Respectfully submitted,

By /Mark R. Kresloff/

Mark R. Kresloff

Registration No.: 42,766

McKENNA LONG & ALDRIDGE LLP

1900 K Street, N.W.

Washington, DC 20006

(202) 496-7500

Attorneys for Applicant